

danger of complete loss of roosting habitat for harriers.

An initiative by the public towards conservation of roost-sites of migrant harriers is the need of the hour. The RCF, by declaring the roost patch as a protected area, should set an example for the private sector.

Long-term monitoring of roosting populations of harriers can prove to be the best indicator of the changes in our environment.

ACKNOWLEDGEMENTS

I gratefully acknowledge Mr. Abhishek Patil, Mr. Jegannath Patil, Mr. Ashok Patil and Mr. Ganga Reddy from Mumbai and Drs. Jayant Deshmukh, Ajit Deshmukh and Deepak Bhat from Akola for their kind cooperation and logistic support during my harrier roost surveys in these districts.

REFERENCES

- ALI, S. & S.D. RIPLEY (1983): Handbook of the Birds of India and Pakistan. Compact Edition. Oxford University Press, New Delhi. Pp. 737.
- CLARKE, R. & V. PRAKASH (1997/98): The wintering ecology of harriers at Rollapadu Wildlife Sanctuary. *Raptor* 25: 43-46.
- CLARKE, R., V. PRAKASH, W.S. CLARK, N. RAMESH & D. SCOTT (1998): World record count of roosting harriers *Circus* in Blackbuck National Park, Velavadar, Gujarat, north-west India. *Forktail* 14: 70-7 1.
- CRAMP, S. & K.E.L. SIMMONS (1980): Handbook of the Birds of Europe, the Middle East and North Africa. The Birds of Western Palearctic. Vol. 2. Oxford University Press, London. Pp. 722.
- GANESH, T. & P. KANNIAH (2000): Roost counts of harriers *Circus* spanning seven winters in Andhra Pradesh, India. *Forktail* 16: 1-3.
- GRIMMETT, R., C. INSKIPP & T. INSKIPP (1999): Pocket Guide to the Birds of the Indian subcontinent. Oxford University Press. Pp. 384.
- KENYON, K.N. (1947): Breeding populations of the Osprey in Lower California. *Condor* 49: 152-158.
- NEWTON, I. (1979): Population Ecology of Raptors. Buteo Books Inc., Vermillion, S.D. Pp. 399.
- NEWTON, I. (1998): Population Limitation in Birds. Academic Press, London. Pp. 597.
- PETERSON, R.T. (1963): The Birds. Life Nature Library. Time Incorporated, New York. Pp. 192.
- PRAKASH, V. (1988): The General Ecology of Raptors in Keoladeo National Park, Bharatpur. Ph.D. Thesis. Bombay University.
- RAHMANI, A.R. (1988): A Pied Harrier *Circus melanoleucos* in northwest Madhya Pradesh. *J. Bombay Nat. Hist. Soc.* 85(2): 419-420
- RAHMANI, A.R. & R. MANAKADAN (1986): A large roost of harriers in Andhra Pradesh, India. *J. Bombay Nat. Hist. Soc.* 83: 203-204.
- SAMANT, J.S., V. PRAKASH & R. NAOROJI (1995): Ecology and Behaviour of Resident Raptors with special Reference to Endangered Species. Final Report (1990-93). Bombay Natural History Society. Pp.111.
- SATHEESAN, S.M. & P. RAO (1990): Roosting and feeding of harriers in Secunderabad, Andhra Pradesh. *J. Bombay Nat. Hist. Soc.* 87(1): 143.
- VERMA, A. (2002a): Wintering ecology of Marsh Harrier. Ph.D. thesis. Mumbai University, Mumbai.
- VERMA, A. (2002b): A large roost of Eurasian Marsh Harriers *Circus aeruginosus* at Keoladeo National Park, Bharatpur, India. *Forktail* 18: 150-151.
- VYAS, R. (1992): Pied Harrier, *Circus melanoleucos* (Pennant) in southeast Rajasthan. *J. Bombay Nat. Hist. Soc.* 89(2): 248.

5. KHASI HILLS SWIFT *APUS ACUTICAUDA*: FIRST RECORD FROM NAGALAND AND MANIPUR, NORTH-EAST INDIA¹

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¹Accepted July 10, 2004

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The Khasi Hills Swift *Apus acuticauda* (Jerdon 1864) is a poorly known vulnerable species from Meghalaya and Mizoram in north-east India, as well as from Bhutan and Thailand (Inskipp *et al.* 1999; Brooke 1969; Kazmierczak pers. comm.). The known distribution of the species is shown in Fig. 1.

Very little information is available on the distribution, ecology and behaviour of this enigmatic species. Baker (1927) collected and observed this species in Cherrapunjee, Meghalaya (erstwhile Assam), and described its taxonomy and breeding in detail. Brooke (1969) dealt with the taxonomy and distribution of this species. There have been recent

observations on its distribution (Inskipp *et al.* 1999; BirdLife International 2001, Ahmed *et al.* 2001, 2002; Kazmierczak pers. comm.).

The Khonoma Nature Conservation and Tragopan Sanctuary (KNCTS) (25° 39' 32" N, 94° 02' 01" E, 1900-2750 m above msl), a 25 sq. km primary and secondary, temperate broadleaf and subtropical evergreen forest, is located 16 km south of Kohima city, bordering Manipur to the south. The average annual rainfall is above 2000 mm. While the maximum temperature reaches 30° C in summer (May-July) it drops below zero in winter (December- January), particularly at 2,500 m above msl.

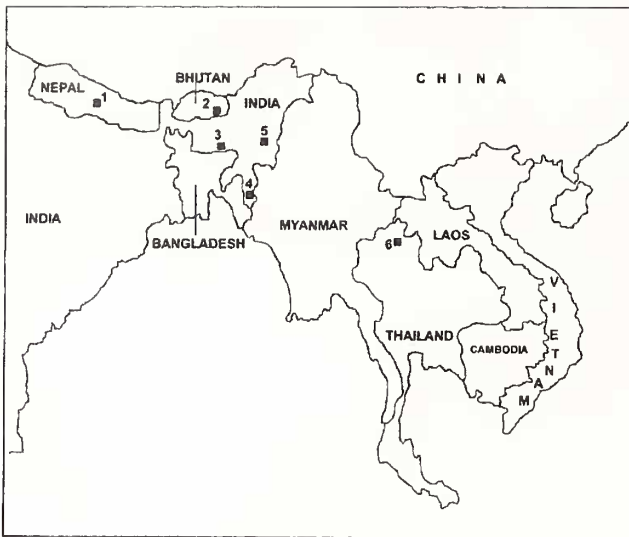


Fig. 1: Distribution of *Apus acuticauda*
 1. Nepal; 2. Type locality: Bhutan; 3. Samdrup Zongkhar,
 4. Cherrapunjee, 5. Blue Mountain and Tlungvel, India;
 6. Khonoma, Thailand; Chang Mai Province

The KNCTS includes part of the Dzuku valley in Nagaland through which Dzüpfü river, a tributary of Barak, flows down cutting deep gorges and cliffs in the narrow valley, providing a suitable habitat for the Khasi Hills Swift. The subtropical and temperate broadleaf forest in the Sanctuary is a suitable habitat for Blyth's Tragopan *Tragopan blythii*. The call of the Tragopan was not uncommon in the KNCTS during our visit.

On April 10, 2003, during a visit to the KNCTS, a community initiated conservation area in southern Nagaland (Fig. 1, location 5) we observed a breeding colony of the Khasi Hills Swift. At the Sanctuary Falls (25° 36' N, 94° 1' E, 2470 m above msl), on the border of Nagaland and Manipur, a series of tall cliffs with crevices, provide a suitable habitat for this threatened bird. We observed 8-10 individuals along with about 20-25 Pacific Swift *A. pacificus*. The Khasi Hills Swifts were flying within 150 m from the cliff. During our 45 minutes

of observation we saw them collecting wind blown moss, probably for nesting.

Though we did not see any breeding behaviour of the Khasi Hills Swift other than that flying close to each other, and collecting probable nesting material, we were convinced that they were in breeding. MFA has observed the breeding behaviour of this species in Cherrapunjee for a considerable time from 2001 to 2003 (Ahmed *et al.* 2001, 2002). The Khasi Hills Swift *A. acuticauda* is thus reported for the first time from the states of Nagaland and Manipur in north-east India. Khonoma is 235 km east of Cherrapunjee (25° 17.016' N, 91° 44.114' E), and 248 km north-east of Aizawl (23° 45' N, 92° 43' E), the two nearest known localities where the species was reported previously.

According to the locals, there may be other such Khasi Hills Swift breeding colonies in the gorges and cliffs of the river Dzüpfü, which originates from the Dzuku Valley, and flows into the Barak river.

The Angami Tribe of southern Nagaland has traditionally been conserving forests, even within their hill slope terrace cultivation. In 1989, the village council agreed to protect the forest of the Khonoma watershed, an important source of water for the village and its wet paddy cultivation. They constituted an independent body called the KNCTS Trust for the management of the Sanctuary. Khonoma is a traditional village and has banned hunting within the village boundary.

ACKNOWLEDGEMENTS

We thank the Bombay Natural History Society and Aaranyak for financial and logistic assistance. We are grateful to the Village Council of Khonoma, which was kind enough to permit us to conduct the survey. We are grateful to Tsilie Sakhire, Director, KNCTS for his all out support and hospitality, and to the Secretary, KNCTS, Khrieto Mor, Petelhulie Ratsa, Thomas Kent, Khekiho Shohe and Apil for their help.

REFERENCES

- AHMED, M.F., B.P. LAHKAR & B.K. TALUKDAR (2001): Survey of the Dark-rumped Swift (*Apus acuticauda*) and its possible suitable habitat in Meghalaya, India. Technical Report, Aaranyak. Pp. 1-21.
 AHMED, M.F., B.P. LAHKAR & B.K. TALUKDAR (2002): Survey of the Dark-rumped Swift (*Apus acuticauda*) and its possible suitable habitat in Mizoram, India. Technical Report, Aaranyak. Pp. 1-10.
 BAKER, E.C.S. (1927): Fauna of British India: Birds. 8 Vols. Taylor and Francis, London. Pp. 327-328.
 BIRDLIFE INTERNATIONAL (2001): Threatened Birds of Asia: The BirdLife International Red Data Book. BirdLife International, Cambridge. Pp. 1784-1787.
 BROOKE, R.K. (1969): Taxonomic and distributional notes on *Apus acuticauda*. *Bull. Brit. Orn. Club* 89: 97-100.
 INSKIPP, C., T. INSKIPP & R. GRIMMETT (1999): Birds of Bhutan. A. & C. Black/ Christopher Helm, London. Pp. 192.
 JERDON, T.C. (1864): Birds of India. George Wymann & Co., Calcutta. [Vol 1: 177, No. 99 (Nepal); Vol. 2: 870].